



MTCA / SMS Advisory Group & Sediment Workgroup

Meeting Notes

Monday, April 26th, 2010

Port of Tacoma Fabulich Center, 09:00 – 15:30 Hrs

Meeting Synopsis / Summary

This was the fifth MTCA / SMS advisory group meeting. Four topics were previewed and discussed: fish consumption rates, sediments, cleanup levels and MTCA rule framework.

Fish consumption – *question / issue: should Ecology adjust and update fish consumption rates for high exposure / sensitive populations?* This would impact surface water cleanup levels. Five possible options were discussed: (A) narrative standard, (B) guidance, (C) more detailed narrative standard, (D) adjust current fish consumption rate and (E) some combination thereof. There was significant discussion about the tables of tribal survey data and fish consumption rates. Questions were asked about the type and quality of the surveys. It was noted that for some contaminants, adjusting cleanup levels for fish consumption would reduce surface water standards to well below ambient concentrations, which isn't technically practicable to achieve. Recommendations – it was suggested that Ecology check exposure duration timeframes for usual and accustomed (U&A) areas and share with the group. It was also suggested that Ecology provide details on how to derive tribal reasonable maximum exposure (RME) scenarios.

Sediments – *human health / background question / issue: what rule revisions are needed to provide clear and predictable sediment cleanup standards?* Ecology vetted an updated decision making framework for sediment cleanups, based upon feedback from both advisory groups. This framework included both short and long term cleanup goals. Short term goal included an option for hot spot cleanups, use of remediation levels and partial settlements, to achieve a final cleanup. Long term goals included potential sediment recovery zones, natural background cleanup goals, and watershed / baywide source control. Outcome / results – advisory group members expressed a desire for certainty and finality in sediment cleanups. For example, some felt Ecology should allow consent decrees for “hot spot” areas only, with the option of a trust fund for non-hot spot (baywide or watershed scale) areas. However, concerns were expressed about whether this could actually be implemented, e.g. Duwamish with multiple (if not hundreds) of PLPs. As for the area and natural background, advisory group members expressed concerns about the reality of mapping contaminants and associated study costs. Specifically, several felt that in reality, the spatial nature and extent of sediment contaminants can be highly variable. In other words, sediment contaminant profiles do not follow “neat” boundaries or clear lines of demarcation. This in turn would impact efforts to establish natural, area or regional background levels.

Several felt that prior to establishing background, you would need to conduct a detailed contaminant fate / transport study. You would also need to have a detailed understanding of currents, tides, etc. Lastly, concerns were raised about the background definition and the term “hydrodynamically defined” area. Recommendations: The advisory groups should continue to work through this current decision making framework. Advisory group summary recommendations / suggestions:

- Use or consider consent decrees for hot spot cleanups, with a trust fund option for non hot spot areas (multiple PLPs would contribute).
- Evaluate the reality of mapping sediment contaminants and associated study costs.
- Check the possible impacts of submarine ground water discharge on sediment cleanups.
- Clarify the background definition and “hydrodynamically defined” area.

Cleanup levels – this was just a brief update on previous work. Synopsis:

- Carcinogen definition – proposed revision, per EPA (2005) guidelines.
- Toxicological hierarchy – IRIS is still gold standard; however, updates are labor intensive.
- Early life stage – this is still a work-in-progress.
- Concurrent soil exposure pathway – work-in-progress.
- Lead cleanup levels – current Method soil lead cleanup level of 250 ppm will likely be revised to 150 ppm (new science).
- Inhalation risk assessment guidelines – Ecology has formed vapor intrusion / risk sub-group with broad representation of qualified individuals. Information developed by this workgroup will be brought back to the Advisory group for discussion. First meeting this week (May 13).
- Updates to Method A ground water cleanup levels – work in progress.

Ecology is requesting feedback and comment on the above issues. Recommendations – it was suggested that Ecology clarify how verbal / written comments are being recorded. It was also suggested that Ecology provide details on the outcome of the science panel meetings.

MTCA Rule Framework - question / issue – Ecology is considering a realignment / reorganization of the cleanup standards piece of the rule. Does this make sense? What do you think? Ecology vetted a proposed outline for both the soil and ground water cleanup standards (MTCA Section’s 720 and 740). Details on when and how to use the Method A cleanup levels were also vetted. Outcome / results – advisory group members had not yet reviewed this material. Therefore, it was recommended that Ecology table this issue for discussion at a future meeting. However, there was some discussion on some of the issues. For example, concerns were raised about how to characterize the ground water to surface water pathway, point of compliance, etc. Some felt that Ecology site managers did not fully understand this pathway, e.g. discharge of non-potable ground water, quantifying attenuation between inland sites and surface water, etc. It was therefore recommended that Ecology clarify this pathway. Petroleum ground water cleanup levels - it was suggested that Ecology check and evaluate transport of “daughter” contaminants, e.g. dioxins, etc.

Acronyms

- MTCA – Model Toxics Control Act (Chapter 173-340 WAC)
- SMS – Sediment Management Standards (Chapter 173-304 WAC)
- H-H – human health.
- TEE – terrestrial ecological standards (MTCA Section 7490)
- PMEP – permanent to the maximum extent practicable (MTCA 360)
- RIFS – remedial investigation / feasibility study (MTCA 350-360)
- TCP – Toxics Cleanup Program (Department of Ecology).
- SEPA – State Environmental Policy Act
- APA – Administrative Procedures Act
- TPH – Total Petroleum Hydrocarbons
- GHG – green house gases
- PQL – practical quantitation limit (laboratory)
- PLP – potentially liable party
- ICs - institutional controls (ICs, MTCA Section 440)
- REL – remediation level (MTCA Section 355)
- G.W. – ground water.
- UECA - Uniform Environmental Covenants
- ELE – early life stage exposure
- IRIS – Integrated Risk Information System

Introduction

09:06 Hrs

Tamie Kellogg – group members / audience introductions. Same drill as last time. Go to 3:30 PM, breaks in the middle, lunch. Tamie will record group / audience comments. Ecology introduction (Martha) – fifth meeting. Some changes in process. Meeting notes sent out yesterday (Sunday). Process is to post notes after group member review. Please check notes when convenient. Status summary – included in meeting notes. New subjects / topics will be added as we move forward. Roadmap – two things: vapor intrusion subgroup; also, July 12th MTCA/SMS group meeting. March 22nd Ecology science panel meeting – some feedback / results from that.

- Shouldn't May 2nd sediments meeting be May 3rd (Monday)? Yes.

Fish Consumption

09:16 Hrs

Craig McCormack, Ecology

Question: should Ecology adjust current MTCA rule fish consumption rates for high exposure populations? Objective – provide background and context. Ecology is leaning towards narrative standard. However, Ecology will consider and evaluate all options. Something needs to be done.

PowerPoint Presentation

Ecology is looking at options and asking questions. Of the options outlined, no decision or recommendation has been made by Ecology. Ecology will consider the discussion by the Advisory Group before making a decision on how to move forward.

Ecology presented a number of options:

1. Provide a narrative standard in rule regarding establishing fish consumption rates that protect high fish consuming populations
2. Provide Guidance
3. Provide in rule specific criteria (a detailed narrative) for site specific determinations for establishing fish consumption rates that protect high fish consuming populations
4. Update in rule the default fish consumption rates that apply for tribal U&A fishing areas
5. Some combination of the above
6. Other ideas?

Ecology asked advisory group members:

- What are the pro's and con's of the various options?
 - Are there other options?
 - Are there other factors to consider?
 - Which option do you prefer?
 - How strong is your preference?
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- Ecology recognizes that the default fish consumption rate in the MTCA rule – based on recreational exposure – is not protective of high exposure populations.
 - Cleanup levels decrease as fish consumption rates increase (MTCA cleanup level equations).
 - For sediments using fish consumption rates will be in guidance.
 - Key point – no decisions have been made.
 - Fish diet fraction – this is the fraction of fish consumed coming from the site.
 - Data about tribal fish consumption is somewhat limited. CRITFC tribal survey (1994); Toy et al. (1996), Suquamish tribe (2000); Sechena et al. (1989); EPA Region X and King Co. area Asian Pacific Islander (API, 1999).
 - Fish consumption rates – 50th - 40-99 g/day; 90th - 113 – 248 g/d; 95th 176 – 334 g/day.
 - Critical factors – Native American cultural significance and Oregon's work.
 - Lab PQLs and background may drive cleanup levels in some situations.
 - Option A – narrative standard. Site-specific tribal rate. May be time consuming.
 - Option B – guidance. Provides explanations and recommendations.
 - Option C – variation of Option A; however, in more detail. Rule would specify a list of specific criteria that must be considered when deriving cleanup levels in U&A areas or when you need to protect high fish-consuming populations.
 - Option D – update the default fish consumption rate.
 - Option E – other options (?).
 - Next steps – evaluate input. Make a decision.

Advisory Group Member Questions / Comments

- ***Is US population consuming more than tribes?*** Some data indicate yes, but need to be careful about where the data came from and what it means. ***What type of food consumption survey is it?*** This is an important question.
- ***Will the fish consumption information (data tables) be posted on Ecology web site?*** No, detailed information is not there.
- ***Barbra Harper, Umatilla tribe*** – has done work showing tribal fish consumption rates are much higher.
- ***Consumption data - not apples to apples comparison.*** Slides are confusing. Ecology/EPA responded that all of the Native American surveys are similar – 24 hour dietary recall studies, Tribal testing of survey vehicles, Tribal training of Native Americans that administered vehicle. It was further noted that the National data based on Continuing Survey of Food Intakes by Individuals (CSFII) was also a 24-hour dietary recall conducted on two non-consecutive days over a period of four years.
- ***If you combine all tribes, then entire Puget Sound is “U&A” area (usual and accustomed).*** There was some discussion that site-specific rates may not be that hard to derive.
- ***Coleville is doing a survey as well as other tribes. More information is out there. You need to check this.*** Ecology - Coleville Confederated tribes are conducting an extensive survey that includes fish consumption as well as other tribal foodstuffs. The Coleville survey is expected to be completed between 2011 and 2012.
- ***Why hasn't the Swinomish tribe study been mentioned?*** Ecology acknowledges that other Tribal survey information may be available, including the Makah Tribe and the Swinomish Tribe. Ecology's intent here was to reiterate information presented by Oregon DEQ in their Human Health Focus Group Report on the Oregon Fish and Shellfish Consumption Rate Project. .
- ***Recent data indicates tribal rates are much higher than Ecology's data.***
- ***Option A “con” - Currently there is limited data, and more data would be needed. It was noted that studies tend to underestimate fish consumption rates, that fish may be unavailable in some areas, and that rates may be suppressed due to perceived risk.*** Ecology - Yes.
- ***Whatcom Co. and waterway – tribes in this area (Lummi, Nooksack) do not have good data and are not doing their own studies. Ecology used middle low-end recreational rate.***
- ***Relative to other places in the country, Oregon and Washington high quality survey data.***
- ***Squaxin, Tulalip and Columbia River tribes – 95th percentile numbers tends to cluster together.***
- ***Ecology should also consider looking at a exposure duration, as well as fish consumption rates and fish diet fraction.***
- ***Is there a standardized method for developing tribal fish consumption rates?*** Ecology - yes, we hope to have a consistent approach. What is in guidance vs what goes into rule is a remaining question. Ecology is considering placing into rule the factors reviewed by the MTCA Science Advisory Board to develop a site-specific Tribal fish consumption rate. These factors incorporate many of the elements of the EPA Framework when developing a Tribal fish consumption rate in the absence of a survey.
- ***Fish consumption rates should be established for a specific geographic area, instead of for individual cleanup sites.***
- Lots of discussion about whether it would make sense to have fish consumption rates based on usual and accustomed fishing areas. However it emerged that this might be difficult because the

U&As are sometimes overlapping or not well definite. Ecology agreed to look and see if this information is collected somewhere.

- ***Future conditions – how is this considered? This is an important issue.*** Ecology – keep in mind that reasonable maximum exposure (RME) considers both current and future land use. Hence, if the RME for a site is based on tribal considerations and is part of the tribal U&A, then remediation is performed. Any remedy would be done to the extent practicable and would be designed to safely harvest fish / shellfish (at tribal rates) for human consumption.
- ***In toxicology, a framework for making decisions is used. For example, based on a reasonable look at U&A areas, plus scientific evaluation of consumption information, it should be possible to come up with a hierarchy for making decisions. Then it comes to a policy question: what is the RME Ecology is protecting against? Is it for 95% of the whole population of WA? Of all tribal people? Of a specific tribe?***
- ***There are two elephants in the room during this discussion – background and source control. Both issues impact cleanup levels.***
- ***Clarify – what we’re talking about for this discussion is surface water standards.*** Ecology – yes.
- ***Is Ecology suggesting a single fish consumption rate for Puget Sound? Ecology - No, different rates for different areas, perhaps based on U&As.***
- ***Would like to see Option B, based on Oregon and Umatilla work.***
- ***Salmon and other fish – exactly how are they exposed to contaminants?*** Ecology – Previous work has concluded that salmon should be included in food chain / exposure models.
- ***Should salmon be separated out from risk / exposure models?*** Ecology - for some tribes, it’s been assumed that some consumption is shellfish / bottom fish, some is salmon, etc. Total consumption “pie” is divided; however, overall consumption rates are closer to ~ 360 g/day.
- Many participants liked Option C (Spell out criteria for site specific determinations) and Option D (updating the default fish consumption rate).
- ***There seems to be a lot of complexity within Option D. Is this realistic? What’s the timeframe for producing a value?*** Ecology – good point. It will take time to derive a default value.
- ***Guidance is not sufficient. Ecology should provide rule language and some sort of basic framework. You need to take a watershed perspective and add-in PQLs and background. How will compliance be determined or measured? This is an important issue.***
- ***Oregon – they did evaluate varying fish consumption rates for up-stream and down-stream locations. This may present issues for MTCA cleanup sites.***
- ***Ecology should provide guidance on evaluating pore water. Interstitial sediment pore water is an important variable.***
- Discussion about tribal U&A areas. Tribes litigate U&A areas; therefore, it may not be possible obtain maps showing these. However, generally – all of Puget Sound is a U&A area for one or more tribes.
- ***Noted that if the cleanup standard is background, then U&A makes no difference. Impact of PQLs and background needs to be checked.***
- ***What’s the next steps?*** Ecology – Thank you. We will evaluate this input and make a decision about what to propose for updating the MTCA rule.

-----10:32 AM Break -----

-----10:49 AM Re-Convene-----

Advisory Group Comments (cont.)

- *Homework assignment – what would you find helpful, within rule, to make fish-consumption rate decisions? Ecology needs your thoughts / input.*
- *It was noted that during the previous MTCA revisions (2007) – there was no assessment of 10^{-6} or 10^{-5} risk; however, other variables were closely scrutinized, e.g. fish consumption.*

Audience Questions / Comments on Fish Consumption

- *Data tables – sounds like apples and oranges comparison. Data shown should have an asterisk showing that the data for the US population is not the same type of data as the tribal data.*
- *Consumption rates vary over several ranges; however, bioconcentration factors (BCFs) also vary by orders of magnitude. Ecology should acknowledge variability.*
- *Bio-magnification / bioaccumulation – Makah tribe has adjudicated on this issue. All killer whales in Puget Sound have high bioaccumulation rates. Puget Sound chinook are more impacted by contaminants. Puget Sound is a PCB sink. Need to review all studies. Ecology should check harbor seals as a sort of “proxy” or bioaccumulation indicator species for various watersheds.*
- *Discussion is interesting; however, Ecology should calculate allowable tissue concentrations for various contaminants. If you do this, then what you find is that standards are very low, e.g. fraction of a ppb for PCBs, which is way below background. Point – if you assume a one in a million risk, then fish consumption doesn’t matter. Fish consumption is just an academic exercise that’s not really that important. Current standards are already unachievable. If you adjust fish consumption, then standards just drop lower – this isn’t realistic or practicable.*
- *Bioaccumulative toxins (e.g. PCBs) are important; however, there are other substances that you need to screen and check for.*
- *It would be easier to have fish consumption standards for sediments, as opposed to surface water standards. If you dredge sediments, then it stirs things up, which in turn can create problems.*

Sediments

Chance Asher, Ecology

11:13 Hrs

Question: what rule revisions are needed to provide clear and predictable sediment cleanup standards?

PowerPoint Presentation

- Objectives – summarize what we’ve heard.
- Provide decision framework details. Obtain feedback.
- Identify implementation issues.
- SMS – problem - no human-health standard. Only designed to protect benthic community.

- Original proposal – one standard; or, upper or lower level (background), with option for site-specific.
- No decisions have been made.
- Feedback to date – focus on “hot spots”, with interim option or partial settlement.
- Site – whatever is above cleanup standard (10-6, background or PQL).
- Short term goals – hot spot cleanup. Use remediation levels.
- Focus on high risk areas or “units” and baywide source control.
- Long term goal – monitored natural recovery – sediment recovery zone.
- Cleanup standard – higher of 10-6, background, PQL.
- Watershed scale background – this has been mentioned a number of times.

Advisory Group Questions

- *Is there a “trigger level” for taking action if monitoring indicates a problem? Monitoring doesn’t mean much if there’s no action. Tribes support trigger levels.*
- *Regional background: embayment, river or watershed scale – how do we make it specific?*
- *Not clear what individual PRPs / PLPs would be asked to do. What’s the settlement look like with PLPs that do hot spot cleanup? When do you get your covenant? In most cases, something is going on in the upland area, e.g. wood treating area, etc. You are generally dealing with significant levels of sediment contamination, followed by possible lower levels of re-contamination from upland sources.*
- *How will Ecology manage short term liability?*
- *Many PLPs are considering acquiring property that has had some industrial activity. They need certainty and finality. They want to be done. They don’t want lingering responsibility that they cannot control. They can only control their site.*
- *Current example - working on a sediment site with a study area that’s been agreed to. Once the cleanup is met, then study area is re-developed. PLP is still technically “on the hook” for remainder of the site. For this to work, areas need to be carefully delineated.*
- *Is part of the problem not identifying cities and counties who may in reality be “initial” PLPs, e.g. stormwater?*
- *Like the idea of hot spot, etc.; however, other questions, long term monitoring, etc. Is there some way to create finality for PLPs?*
- *Suggestion – if you have hot spot unit cleanup as part of a bigger site, then provide finality. Provide consent decree settlement for hot spot only. Do not force PLPs into site wide settlements. Re-opener – if PLP does something to re-contaminate hot spot, then they are on the hook. In other words, provide a limited re-opener. Don’t provide an unlimited re-opener. Need to provide enough certainty to change behavior.*
- *How do you then address remaining contamination outside of hot spot, e.g. Elliott Bay? How do you stitch or network PLP liability for areawide contamination?*
- *If you want finality, then have PLPs fund a trust (or something similar) that would be used for areawide or broader-scale cleanups. Establish a re-contamination trust fund that all PLPs would contribute to.*
- *If you want to establish finality or closure for PLPs, then you still need to figure out what you cleanup to.*
- *Some of the questions that are being asked do not fit within various “perceptions” of conceptual site models. For example, contaminants may not follow neatly defined lines or boundaries (as depicted in PowerPoint slide). You may not have neatly defined units or hot*

spots that can be allocated for cleanup and liability. At the end of the day, you may not know the line of demarcation between regional and natural background, etc. We seem to making this assumption about boundaries; however, this may be fatal flaw.

- *What's the site definition? That's what we keep coming back to. If you assume current MTCA language, then "site" = entire bay. Seems like we keep going around in circles. PowerPoint slide – you would need to go all the way out to main basin and sample natural background to figure out site.*
- *Site definition is actually becoming less important. Ecology will probably not waste time on "postage stamp" size site cleanups. Question now is what do you cleanup hot spot unit to? Will likely dredge and cap hot spot. This area will initially be much cleaner than surrounding area.*
- *Once you settle hot spot cleanup, then you should have some type of premium payment plan for the rest.*
- *It's naive to say that you can neatly define hot spot or "Unit A". There may be many upland contributors to hot spot, e.g. municipal stormwater, etc. Don't assume that resolving hot spot liability is simple and easy task. This is not commensurate with past history / practice.*
- *Interim actions mean nothing to PLPs. All it means is they are on the hook.*
- *Lake Union – thought to be one giant site; however, at Gas Works Park, Ecology was able to identify two distinct PLPs. Thus, for hot spot cleanups, can't we use forensic methods to identify PLPs? Just a thought.*
- *For embayment's, you will in most cases have no idea who did what. Highest currents are at bottom bay. You will in most cases need bay-wide study.*
- *Background definition and "hydrodynamically defined area" – what exactly does this mean? You can ratchet this perspective down to a very small area; or, you can expand to larger areas. For example, Lake Roosevelt – 80-ft. drawdown each year; this has a huge effect on contaminants, as well as sediment pore water (pressure, etc). Water level fluctuations can significantly impact contaminant fate / transport.*
- *You need to provide definitions for multiple areas, e.g. shallow or deep bays, etc. Political boundaries may also create problems.*
- *Sub tidal / submarine ground water discharge and inputs – this has not been addressed at all. Submarine g.w. discharge needs to be evaluated.*
- *Provide incentives for those PLPs who move quickly and take care of problems. Likewise, consider consequences or penalties for those who do not take action or delay. Try and get all PLPs to the table.*
- *Piece-meal approach doesn't work. You must evaluate holistically.*
- *What would that look like, e.g. Lower Duwamish? There's literally hundreds of PLPs. Would they all be under one consent decree?*

-----LUNCH BREAK -----12:30 Hrs

-----Re-Convene -----13:10 Hrs

Sediments (cont.)

Homework Assignments (Advisory Group)

- *How do you derive background for freshwater sites, e.g. a river with a dam between two states?*
- *How do you best define hydrodynamically defined area?*
- *How do you define background for small embayment's, e.g. Fidalgo Bay – entire bay be area background. This is a tricky issue. One upland source may dominate entire bay.*
- *How do you weave-in or use “technical feasibility” for sediment cleanups? What’s technically practicable?*
- *How do you use or consider net environmental benefit for sediment cleanups?*
- *What is or what defines regional background? Ecology needs feedback.*

Advisory Group Comments / Questions

- *You need to first conduct fate / transport studies before you resolve liability. You need to understand conceptual site model, e.g. currents, etc. Hydrodynamics of rivers are so dynamic that it’s very difficult to link contaminants back to one unique source. This takes a lot of work. You may need to consult with experts to flesh this out.*
- *If you dredge an area that’s seasonally affected, then that may exacerbate problems. For example, upland runoff may re-contaminate sediments.*
- *Technical feasibility – you cannot dredge entire bay or waterway. Some areas may be a depositional, others dominated by erosion trends / patterns.*
- *Technically feasible – what’s feasible today may not be tomorrow. You need to look at this long-term.*
- *Combined sewer overflows (CSOs) and stormwater should be incorporated into background approach.*
- *Take a balcony view - what’s impacting food web to begin with for any given watershed is crucial. You need to understand this before you get to technical feasibility.*
- *Are you asking for comments on how to incorporate technical feasibility for SMS? Please clarify. The SMS already reference or allow for technical feasibility. What are we talking about - MTCA or SMS? Unless you change MTCA, it won’t make any difference. Both MTCA / SMS would have to work together.*
- *Is there a way for Ecology to set or establish stormwater levels at MTCA cleanup levels?*
Ecology – no, this is not on the “to do” list for now. However, Ecology does have the ability to check and evaluate source control.
- *Define what would be required to define hot spot unit, as well as resolving liability.* Ecology – we need feedback on this. We’re not sure yet.

Audience Comments / Questions

- *There is some merit to regional background; however, developing a database for each or area or region is daunting. We’ve tried this on the Duwamish and it was very complicated. Who’s responsibility is this? Also, PLPs may not want to do this. There’s a lot of areas that would*

need unique data, e.g. freshwater -Spokane, Columbia, Yakima; marine – all the Puget Sound sites. Bottom line – developing regional background is easier said than done.

- *How do you delineate hot spots? Need to understand oceanography and fate / transport. Also need to have sampling regime that accurately identifies hot spots. May need 3D sampling plans. Better delineation results in more efficient cleanups.*
- *Natural vs. regional background – if one is only slightly higher than the other, than probably not worth the time. Also, site unit is much better way to go, along with chemical signature / use of forensics.*
- *The line between polluter and the public good – try and obtain information between Puget Sound Partnership. This is a complicated question.*

Cleanup Levels

Dave Bradley, Ecology

13:57 Hrs

No PowerPoint – Handout

Objective – update and request for more comments.

- Carcinogen definition – proposed revision, per EPA (2005) guidelines.
- Toxicological hierarchy – IRIS is still gold standard; however, updates are labor intensive.
- Early life stage – this is still a work-in-progress.
- Concurrent soil exposure pathway – work-in-progress.
- Lead cleanup levels – current Method soil lead cleanup level of 250 ppm will likely be revised to 150 ppm (new science).
- Inhalation risk assessment guidelines – Ecology has formed vapor intrusion sub-group. First meeting this week (May 2).
- Updates to Method A ground water cleanup levels – work in progress.

Homework – more comments on all of the above.

Advisory Group Comments / Questions

- *Are you giving more weight to written comments? How are verbal comments being recorded?*
Ecology – we certainly track both; however, written comments with detailed thoughts tend to be more useful.
- *Process – how is information from the Ecology science panel conveyed to advisory group?*
Ecology – we've routed information back to advisory group, e.g. March 22nd early life stage, etc.
Chair of science panel is currently on assignment to Washington, D.C.

MTCA Rule Framework

Pete Kmet, Ecology

14:09 Hrs

No PowerPoint – Handout

Question / issue – Ecology is considering a realignment / reorganization of the cleanup standards piece of the rule. Does this make sense? What do you think?

- Soil and g.w. standards cleanup outline.
- When to use Method A.
- Proposed outline – objective is to try and simplify / streamline.
- Ingestion + dermal would be used for all cleanup levels. Duplicate language would be eliminated.
- Proposed outline does not account for early life stage exposure (cleanup levels).
- Cleanup level equations may be moved from body of the text and consolidate elsewhere within the regulations.
- Method A g.w. cleanup levels – somewhat confusing about when you can use, etc.
- Modified Method B – this may not be all that helpful.
- Method C – can be problematic for both surface water and g.w. because of risk 10-5 risk threshold, etc.
- Ground water point of compliance – sites that are near or abut surface water.
- Ground water compliance monitoring – current MTCA statistical requirements (95 UCL on the mean) are not being adhered to. Site managers / PLPs typically use results from 2-4 samples for compliance decisions. Would like to incorporate “direct comparison” approach (like soil).
- Vapor intrusion – soil and g.w. cleanup levels need to account for this exposure pathway; however, not sure about best way to do this. Ecology feels that current g.w. standards are probably protective of vapors. For soil, there’s not much correlation between soil gas and indoor air; therefore, may switch to or adopt terrestrial ecological (TEE) type approach.
- Soil compliance monitoring – can you use average? What’s best approach?
- Section 747 (soil-to-gw pathway) “empirical demonstration” – this is somewhat unclear. Would like to clarify.
- Method A g.w. – not protective of surface water. Get rid of “routine” site concept. Need to incorporate vapor intrusion. Probably should not have Method A surface water standards.
- Method A soil – site-specific TEE – if you opt for this, then you are not supposed to use Method A. Eliminate “routine” sites.

Advisory Group Comments / Questions

- ***Is there a way to adjust cleanup levels for petroleum mixtures to account for other substances, e.g. dioxins, etc.? Petroleum may be exacerbating contaminant transport. Please check this.***
- ***Near or adjacent to surface water – non-potable water. You can be a mile or more inland and you must account for g.w. discharge to s.w.; however, g.w. is not-potable. You must assume that “fish are swimming” in upland well – this is a real problem. Ecology staff are misinterpreting regulations. Surface water standard is applied directly to upland well. How do you account for attenuation between upland location and surface water?***
- ***Will non-potable demonstration be expanded or clarified? Please provide details on sampling methodologies for gw-sw discharge.***
- ***Are proposed changes the result of “bad” outcomes? Or, is it cleaner and niftier if it looked this way?*** Ecology – most of the proposed changes are the result of repeated questions.
- ***Has Ecology considered multi-incremental sampling for soil compliance monitoring? What about EPA ProUCL statistical package?***
- ***Ecology should check with Hawaii as they use multi-increment sampling.*** Ecology has consulted with Hawaii.

- *Provide guidance on what “unlikely” to reach surface water means.*
- *Do you like concepts / proposed revisions?* Don’t know yet. Just got it.
- *Would you like to dedicate time at future meetings to discuss this?* Yes.

Audience Comments / Questions

- *Ground water cleanup levels – please reward good science. We understand tidal issues. Tidal processes are a natural phenomenon. Don’t eliminate tidal processes as a dilution factor. Please limit what you put in rule. A lot of sites are different.*
- *Vapor intrusion – please provide a commercial exposure scenario, as well as clear guidance on when modeling will be allowed. Lastly, please provide details on how best to account for attenuation between g.w. and s.w.*
- *Tidal influence and gw-sw discharge – Ecology site managers have been inconsistent on how they handled this issue. Please make it consistent. Lastly, soil-to-gw cleanup levels and empirical demonstration – Ecology site managers may not accept. Please try and clarify.*
- *Please clarify, in rule, gw-sw pathway. Not all consultants handle this well.*

Homework

- *When and what should group get back to Ecology on?* Please provide thoughts on framework within next couple of weeks (mid-May). *How about stretching this to late May?*
- Please check March meeting notes and if you have revisions provide them by this Friday.

Next Steps

- Next meeting May 24th. Topics – integrating MTCA / SMS; freshwater sediment standards, need to let advisory group digest MTCA rule framework.

-----Meeting Adjourned - END – 15:10 HRS – Thank-You!!-----